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The Honorable Julius Genachowski, Chairman
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Reply Comments for Public Notice DA 12-214 (IB Docket 11-109)

Dear Chairman Genachowski:

As a long-time recreational boater, I am responding to misleading and misinformed comments submitted by the Boat Owners Association of the United States (BoatU.S.) and other boaters who have submitted comments at the Association's behest.

The Integrity of the GPS Signal

The most common comment pushed forward by BoatU.S. and its members is that the Commission should suspend LightSquared's 2004 ATC license because the Global Positioning System (GPS) signal will be disrupted by LightSquared's proposed terrestrial network. This is false. The integrity of the GPS signal provided by the United States Air Force is not compromised in any way by LightSquared's proposed ATC service. Rather, the issue at hand is the reception of the GPS L1 signal centered around 1575.42 MHz by GPS receivers. In reviewing this matter, the Commission should treat GPS receivers, as part of the GPS *user segment*, as distinct from the GPS *space segment*. These two segments should not be conflated by the Commission as they are by BoatU.S. which argues falsely that the system as a whole is irreparably at risk. Factually, it is the design of the GPS receivers that places the GPS user segment at risk of interference – whether it is from a solar flare, a GPS jammer, a radio station tower, or LightSquared's proposed ATC service. It is critical to delineate LightSquared's non-impact on the space segment from its alleged impact on the user segment because the space segment is operated by the government and the user segment is largely the purview of a few commercial GPS device manufacturers who profit greatly from designing GPS receivers that are not sufficiently protected from interference in non-GPS bands of spectrum which could have been prevented using existing filtering components.

Susceptibility of GPS Receivers to Interference Due to Lack of Competition in GPS Industry

BoatU.S. has also encouraged boaters such as me to write to the Commission suggesting that “LightSquared’s proposed network would cause interference and that there are no remedies.” This is false. Not only is interference to GPS devices caused by the design of the GPS device, there are “remedies” or components that GPS manufacturers can install in devices to ensure that these GPS devices are resilient to high-powered uses of non-GPS spectrum. For example, some GPS device manufacturers such as Javad GNSS, Hemisphere GPS, Patron America and PCTel have developed devices that function perfectly even when placed directly next to a LightSquared terrestrial transmitter broadcasting at high power during independent testing.

GPS devices are undoubtedly useful in maritime applications whether they are for recreational or public safety purposes. However, rather than drive innovations and establish a regulatory environment that would ensure greater reliability of GPS devices, the Commission has politically caved to a few obstinate GPS device manufacturers who are more concerned about their profit margins than they are about providing GPS devices that everybody from boaters to hikers to pilots can truly rely on. This is reflective of an industry that does not have enough competition and the Commission’s decision in this matter only weakens GPS device manufacturers’ incentives to develop more resilient GPS receivers.

Recommendation

The Commission should not suspend LightSquared’s license to deploy an ATC 4G-LTE service that would be wholesaled to 260 million Americans by the end of 2015. LightSquared’s integrated terrestrial-satellite network would give boaters commercial access to affordable satellite communications service for the first time due to the network’s coverage of the entire country and 200 miles off each coast – to have this capability in the same phone that I use for calls, texting, video streaming, and other wireless broadband uses in areas covered by the 4G network. Ironically, I also use my phone for GPS navigation while driving and it should be noted that all tests – conducted by the government or otherwise -- have shown that none of the GPS receivers in cellular devices would be affected by LightSquared’s proposed network.

In lieu of suspending LightSquared’s license and throwing away \$14 billion of privately funded wireless infrastructure expansion, the Commission should clarify the rights of the GPS user segment in adjacent non-GPS bands and push GPS manufacturers to commercialize more resilient and reliable GPS devices – particularly those used by public safety. This would drive this spectrum to a greater and more efficient use and allow Americans to enjoy the benefits of more reliable GPS services *and* a new wholesale nationwide mobile broadband network.

Sincerely,

Bill Lunnell